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1943 Fertilizer Recommendations

For

Wheat, Other Fall-Sown Grains, and Permanent Pastures

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The judicious and liberal use of fertilizers is one of the most important steps toward solving the food and feed problem. The fall situation concerning fertilizer supplies is as follows:

(1) A liberal supply of nitrogen will be available for fall-sown grain.
(2) Phosphorus supplies will be greater than last year.
(3) Potash supplies cannot be increased, as can those of nitrogen and phosphate.

Fig. 1.—Good meadows are essential for productivity.

Early Delivery of Fertilizers Necessary.—There are serious labor and storage shortages in the fertilizer factories and local dealers must use the trucks and labor available to the best advantage. If the fertilizer industry is to get adequate quantities of fertilizers to farms before wheat seeding time, farmers must place orders early and accept delivery whenever the fertilizer is available in July, August and early September. There is no alternative. The fertilizer should be stored in a dry place on the farm.

Necessary to Have Good Sods to Plow Under for War-time Crops

Fertilize Companion Grain Crops Well.—In the face of ever-increasing war-time demands for increased food and feed production, it is of paramount

OHIO'S WARTIME FERTILIZER RECOMMENDATIONS FOR WHEAT, C

MODIFYING CONDITIONS:

"MANURED" means that 8 tons or more of manure was used per acre on the immediate crop or during the preceding year.

"LEGUME SOD IN ROTATION" means that clover, alfalfa, and sweet clover, alone or in mixtures, are grown regularly in the rotation and that good sods of these legumes are plowed under.

RATES OF APPL

Figures dir
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a ratio class
equally satisfa
tionate rate.

CROP	LIGHT COLORED SOILS	
	Manured	Legume sod in rotation
FALL-SOWN WHEAT, BARLEY, RYE	0–20– 0* 0–14– 7 2–12– 6	0–14– 7 0–12–12* 2–12– 6 3–12–12*
A. To be seeded to a meadow to be held 2 years or longer	350	400
B. To be seeded to 1-year meadow or to green manure crop	250	300
C. Following soybeans	Where fall-sown grains as much potash as can be ob	
PERMANENT PASTURE	0–20– 0*	
Apply as topdressing every fourth year	400	

* *Available Fertilizer Grades.*—The principal fertilizer grades available for use on fall-sown grains are 0–14–7, 2–12–6, and superphosphates (0–18–0 and 0–20–0). Only small amounts of 0–12–12, 3–12–12, 0–10–20, and 3–9–18 are available because potash is being saved for use in spring fertilizers; likewise only limited amounts of multiple grades like 0–20–10, 0–14–14, 0–20–20 and 3–18–9 will be available because

importance that every farmer adequately fertilize the "companion" small grain crop in which "soil building" legumes are to be seeded. On the livestock and general farm, this is the most important fertilizer application made in the rotation.

The average application of fertilizer on wheat in Ohio has been slightly under 200 pounds per acre. Every Ohio farmer should use at least 250 pounds per acre on wheat in 1943. Where seedings are to be made with the grain crop, heavier applications will be found to be highly profitable.

It will be noted in the recommendations for fertilizing small grains that the acre rates of fertilization are increased according to the proposed length of life of the meadow crop to be seeded therein. Adequate fertilization of the "companion" grain crop will include full provisions for fertiliza-

ΛT, OTHER FALL-SOWN GRAINS AND PERMANENT PASTURE — 1943

· Application:

es directly beneath grades are recommrates in pounds per acre.

the most commonly available grade in class is shown. Multiple grades are satisfactory. Apply them at a proporate.

Grades and Analyses:

The series of figures by which a grade or analysis is designated expresses the percentage of total nitrogren, available phosphoric acid, and water-soluble potash respectively.

) Soils		Dark Colored Soils			Mucks and Peats	
od n	Neither	Manured	Legume sod in rotation	Neither	Manured	Not Manured
7 :* 5 :*	2–12– 6 3–12–12* 4–10– 6*	0–20– 0* 0–14– 7	0–14– 7 0–12–12*	2–12– 6 0–12–12* 3–12–12*	0–12–12 0–10–20	0–10–20 3– 9–18
	400	300	350	350	300	350
	300	250	300	300	250	300

grains follow soybeans, use at rate shown for (A) and a complete fertilizer containing be obtained. A limited amount of 4–10–6 will be available for this purpose.

0–14– 7	0–20– 0*		0–14– 7	0–14– 7	0–12–12
500	350		450	400	450

the 45% superphosphate, produced in this country and required for manufacturing such high analysis fertilizers, is largely used to fulfil Lend-Lease obligations. A small amount of 4–10–6 will be available and is most valuable for late seedings following soybeans or on light colored soils of average productivity or less.

tion of the following meadow crop—a real step towards adequate fertilization of the rotation. A really well fertilized crop ordinarily uses only part of the nutrients applied, and a considerable part of the phosphoric acid and potash is available for use by subsequent crops.

Averaging 7 years' results of experiments in eight Ohio counties, the direct effect of fertilizing wheat was an increase of 18.2 bushels, and the residual or hold-over effect on the following hay crop was an increase of 1400 pounds. These increases are large because of the low yields of the check plots.

Make Seedings in All Wheat.—A seeding for hay, green manure, pasture or seed production should be made in all wheat fields and other small grains in the fall of 1943 and in the spring of 1944, if seed is available. Alfalfa-clover-grass mixtures are the best seeding for hay, and sweet clover is superior for green manure, but the common clovers must be used when soil conditions are not satisfactory for alfalfa and sweet clover, alone or in mixtures.

Other Soil Treatments to Help the Hay Crop.—Lime the land when it needs liming so that alfalfa mixtures may be grown. Include alfalfa in all hay seeding mixtures where soil conditions warrant it, and reduce the amount of clover seed sown proportionately.

Manuring the wheat in the fall or winter is an essential practice in getting good new seedings on light colored soils. An application of 4 to 8 loads per acre is recommended and strawy manure is preferable. The slopes and less productive areas should be manured early and the remainder of the field later. This use of manure should have a priority over other uses on light colored soils.

When manure cannot be stored under shelter, it should, so far as possible, be hauled directly from the stable to the field. Tight floors in stables and storage, and the use of plenty of bedding help to reduce losses. If it must be kept out of doors, it should be put in rather high piles or confined to feeding pens or small areas.

Applying Fertilizers to Established Hay Fields and Pastures.—In applying fertilizers carrying phosphoric acid and potash to established stands of alfalfa and permanent pastures, some incorporation with the soil is desired. Ordinarily, this may be obtained by using a disc fertilizer drill and adjusting it to cut as deeply as possible, or the fertilizer may be applied to the surface and incorporated with a spring-tooth harrow. Except on established meadows or permanent pastures, applications of phosphate and potash fertilizers are best made at planting time.

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